



Lenovo ThinkAgile SDI with Cisco Nexus: Integrated Hyperconverged Infrastructure for the Modern Data Center

Solution Brief

Summary

The ThinkAgile HX Series are pre-integrated with Nutanix software to deliver a seamless hybrid cloud solution for AI and modern workloads. ThinkAgile VX Series delivers a turnkey co-engineered VMware solution for faster deployments and seamless operations. With the addition of Cisco Nexus 9300 Series switches support for ThinkAgile HX and ThinkAgile VX, Lenovo now provides a comprehensive, joint solution that combines compute, storage, virtualization, and networking. These solutions simplify deployment, enhance scalability, and streamline management for modern data centers.

Key Benefits

- **Simplified Deployment:** Pre-integrated systems reduce setup time and complexity.
- **Scalable Performance:** Combined compute and networking support demanding workloads.
- **Unified Management:** Centralized control across compute, storage, and networking.
- **Enhanced Security:** Consistent policy enforcement throughout the infrastructure.

Topics in this section:

- [Lenovo ThinkAgile HX Series](#)
- [Nutanix Cloud Platform](#)
- [Lenovo ThinkAgile VX Series](#)
- [VMware Cloud Foundation](#)

Lenovo ThinkAgile HX Series

The ThinkAgile HX Series integrates Nutanix's software-defined infrastructure, combining compute, storage, and virtualization into a single solution. This HCI approach simplifies data center operations and accelerates deployment of applications across hybrid and multicloud environments.

Key Features:

- **Pre-Integrated Solutions:** Factory-integrated with Nutanix software for rapid deployment.
- **Flexible Configurations:** Supports various workloads with scalable node options.
- **Centralized Management:** Unified control through Nutanix Prism interface.
- **High Reliability:** Lenovo servers consistently achieve high reliability ratings, ensuring business continuity.

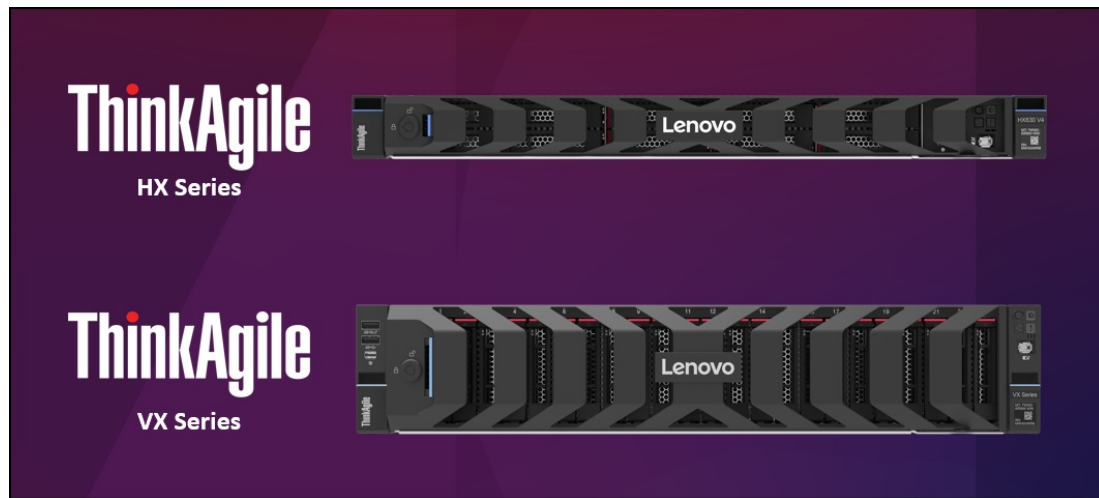


Figure 1. ThinkAgile HX and ThinkAgile VX platforms

Nutanix Cloud Platform

Nutanix offers a unified platform that merges compute, storage, networking, and security, enabling seamless management of applications and data across datacenters, edge locations, and public clouds.

Platform Advantages:

- **Unified Management:** Single interface for managing diverse environments.
- **Operational Efficiency:** Reduces complexity and operational overhead.
- **Flexibility:** Supports various hardware and cloud configurations.
- **Resilience:** Built-in redundancy and failover capabilities ensure high availability.

Lenovo ThinkAgile VX Series

The ThinkAgile VX Series features VMware Cloud Foundation is a Value-Added OEM(VAO) solution converging compute, storage, and virtualization into a single platform. This HCI approach accelerates application deployment and simplifies operations across hybrid and multicloud environments.

Key Features:

- **Pre-Integrated Solutions:** Factory-integrated with VMware software for fast deployment.
- **Flexible Configurations:** Scalable node options to support a variety of workloads.
- **Centralized Management** SDDC manager provides a unified management interface.
- **High Reliability:** Lenovo servers consistently ranked as the industry's most reliable.

VMware Cloud Foundation

VMware Cloud Foundation is an integrated software platform that combines compute, storage, networking, and security with comprehensive cloud management—enabling a consistent and secure hybrid cloud experience across private and public infrastructure.

Platform Advantages:

- **Unified Operations:** Centralized management for virtual infrastructure and modern applications across hybrid and multicloud environments.
- **Simplified Lifecycle Management:** Streamlined deployment, patching, and upgrades with automated workflows.
- **Infrastructure Flexibility:** Supports diverse deployment models across on-premises data centers and major public cloud providers.

Enterprise-Grade Resilience: Built-in availability, automated recovery, and robust security capabilities.

Cisco Nexus 9300 Series Switches

Lenovo is an official Cisco Solution Technology Integrator (STI) for Cisco Nexus 9300 Switches, licenses, and Cisco Smart Net Services, integrated with our Lenovo ISG Servers and Storage solutions. The Cisco Nexus 9300 Series Network Switches are designed to meet the evolving demands of modern data centers, providing high-density, nonblocking, and low-power-consuming solutions. These switches are ideal for top-of-rack (ToR), middle-of-row (MoR), and end-of-row (EoR) deployments in enterprise data centers, service provider facilities, and large virtualized and cloud computing environments.

Key Features:

- **Switching:** Supports both Layer 2 and Layer 3 switching.
- **High Bandwidth:** Supports up to 2.56 Tbps of internal bandwidth.
- **Flexible Deployment:** Functions as spine or leaf in network topologies.
- **Advanced Security:** Features like MACsec provide secure data transmission.
- **Operating Modes:** Supports both Cisco NX-OS and Application Centric Infrastructure (ACI) modes.

Recommended Models:

- Cisco Nexus 93180YC-FX3: 48 × 25G ports, 6 × 100G ports
- Cisco Nexus 9336C-FX2: 36 × 100G ports

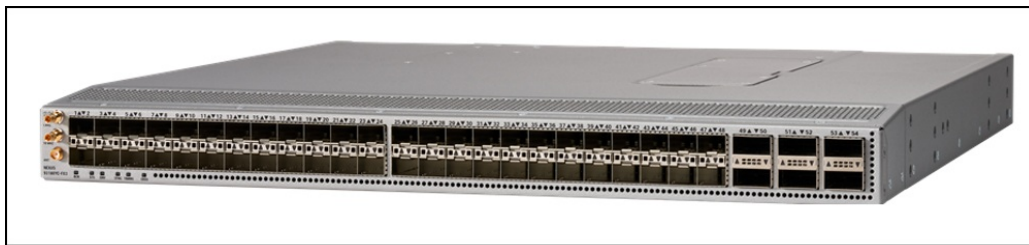


Figure 2. Cisco Nexus 9300 Series Switch

Cisco Application Centric Infrastructure (ACI)

Cisco ACI Integration: The integration of Cisco Application Centric Infrastructure (ACI) with Nutanix AHV Hypervisor or VMware vSphere and VMware Cloud Foundation (VCF) enables seamless, automated network provisioning and policy enforcement across both virtual and physical infrastructure. This synergy allows for consistent policy-driven connectivity as workloads move within and across Nutanix or VMware environments.

Microsegmentation: Cisco ACI's integration with Nutanix Flow Network Security or VMware NSX-T allows for granular security policies, providing defense-in-depth and reducing the attack surface within the data center.

Combined Value Proposition

Combining Lenovo ThinkAgile SDI platforms with Cisco Nexus 9300 Series switches delivers a cohesive solution that addresses the needs of modern data centers. This combination offers simplified deployment, scalable performance, unified management, and enhanced security, enabling organizations to efficiently manage their IT infrastructure and accelerate digital transformation initiatives.

Resources

For more information, see these resources:

- Lenovo ThinkAgile HX Series Datasheet:
<https://lenovopress.lenovo.com/datasheet/ds0019-lenovo-thinkagile-hx-solutions>
- Cisco ACI and Nutanix AHV Integration:
<https://www.cisco.com/c/en/us/td/docs/dcn/aci/apic/kb/cisco-aci-nutanix-integration.html>
- Lenovo ThinkAgile VX Series Datasheet:
<https://lenovopress.lenovo.com/datasheet/ds0104-thinkagile-vx-series- Cisco Nexus 9300>
- Cisco ACI + VMware NSX-T Integration Guide
- <https://www.cisco.com/c/en/us/td/docs/dcn/aci/apic/6x/virtualization/cisco-aci-virtualization-guide-60x/ACI-Virtualization-Guide-60x-aci-with-vmware-nsxt.html>
- Cisco Nexus 9300 Series Product Guide:
<https://lenovopress.lenovo.com/lp2034-cisco-nexus-9300-series-network-switches>

Related product families

Product families related to this document are the following:

- [Nutanix Alliance](#)
- [ThinkAgile HX Series for Nutanix](#)
- [ThinkAgile VX Series for VMware](#)
- [VMware Alliance](#)

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